

May 2, 2005

Peter Van Alyea
Redwood Oil Company
455 Yolanda Avenue, Suite 200
Santa Rosa, CA 95404

Ground Water Monitoring Report
February 2005
Former Redwood Oil Bulk Plant
105 X Street
Eureka, California
ECM Project #99-110-04

Dear Mr. Van Alyea:

This report provides the results of quarterly ground water monitoring at the Former Redwood Oil Bulk Plant at 105 X Street in Eureka, California (Figure 1, Appendix A). On February 23, 2005, ECM Group personnel visited the site. Ground water elevations were measured and ground water samples were collected from the six monitoring wells (MW-1 through MW-6) in accordance with the site monitoring program.¹ The well locations are shown on Figure 2 (Appendix A).

Ground water levels were measured in each of the wells. Free-phase hydrocarbons were not observed in any of the wells. Wellheads and well vaults were observed to be in good condition. Water level data is shown in Table 1 (Appendix B) and a ground water elevation contour map is included as Figure 2 (Appendix A).

The samples were forwarded under chain of custody record to Entech Analytical Labs, of Santa Clara, California for analysis. Analytical results for ground water are included in Tables 2 and 3 (Appendix B). Ground water samples were collected in accordance with ECM Standard Operating Procedure - Ground Water Sampling (Appendix E). The chain of custody document and laboratory analytical reports are included as Appendix C. The water sampling data sheets are included as Appendix D. Purge water and decon rinseate were transported to an ROC tank for proper disposal.

Analytical results for this sampling event were generally consistent with results from prior

¹

Monitoring and Reporting Program No. R1-2004-0113 for Redwood Oil Company, 105 X Street, Eureka, CA, December 2, 2004.

sampling events. Samples from well MW-1 were analyzed for gasoline and MTBE. Gasoline and MTBE were reported in the laboratory report. The laboratory reported that the gasoline result was due to the presence of MTBE in the test range. No gasoline was identified in the sample. The concentration of MTBE has been higher during February samples for the previous two years, and the results from this sampling event were reflective of that trend.

Results from the February 2005 sampling event showed the concentration of MTBE at an historical high in MW-1. A confirmation sample was collected from MW-1 on April 21, 2005. Results from this sample were consistent with the results from the February 23 sample. MW-1 has been scheduled for quarterly monitoring to further characterize the contamination trends in this well.

Samples from well MW-2 were analyzed for gasoline and MTBE. No gasoline was detected in the sample, and a low concentration of MTBE was detected. Results were consistent with previous results for samples from MW-2.

Sample from well MW-3 were analyzed for gasoline, BTEX compounds, and MTBE. A moderate concentration of gasoline and low concentrations of BTEX and MTBE were reported in the sample. All results for the sample from MW-3 were consistent with previous results from MW-3.

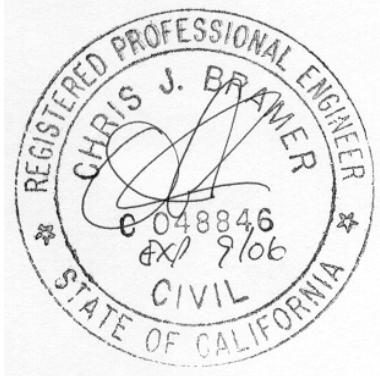
Samples from wells MW-4, MW-5 and MW-6 were analyzed for MTBE, and the sample from MW-5 was also analyzed for gasoline. Very low concentrations of MTBE were detected in each of the samples. A low concentration of gasoline was detected in the sample from MW-5. All results were consistent with previous results for well MW-4 through MW-6.

Thank you for the opportunity to provide environmental services to Redwood Oil Company.
Please call if you have any questions.

Sincerely,
ECM Group



David Hazard
Environmental Scientist



Chris Bramer
Professional Engineer #C048846

- Appendices:
- A - Figures
 - B - Tables
 - C - Chain of Custody and Laboratory Analytical Reports
 - D - Water Sampling Data Sheets
 - E - Standard Operating Procedure

cc: Kasey Ashley, North Coast Regional Water Quality Control Board
Mark Inglis, Chevron Products Co.

**APPENDIX A
FIGURES**

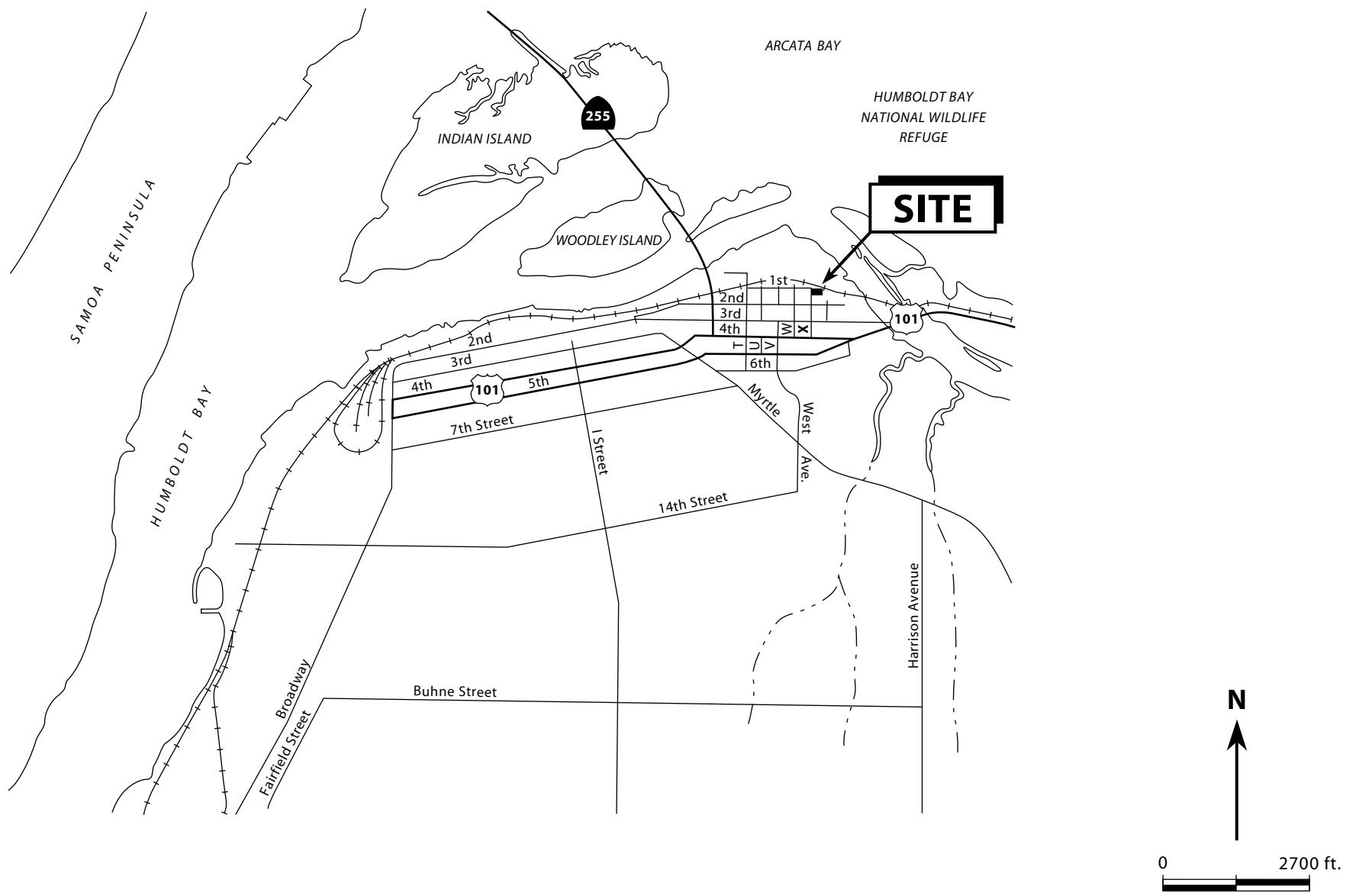
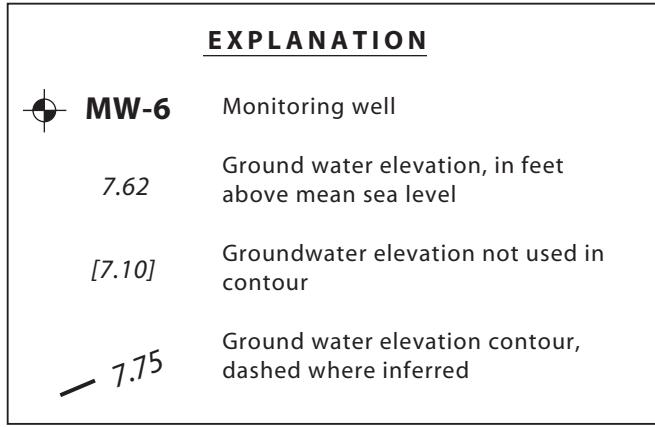


Figure 1.□ Site Location Map - Former Redwood Oil Bulk Plant, 105 X Street, Eureka, California



Approximate ground water flow direction with an approximate gradient of 0.008-0.02 ft/ft

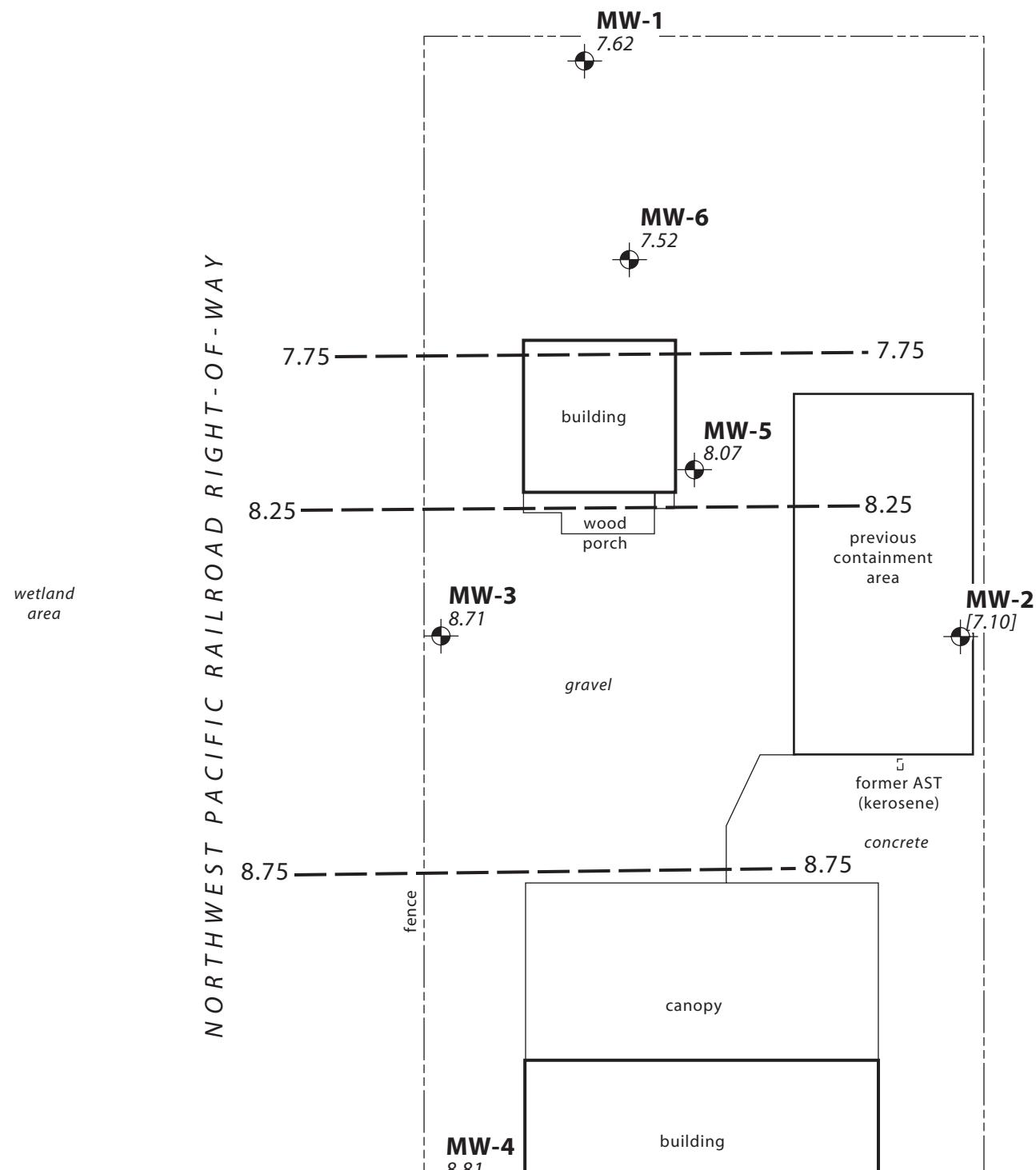


Figure 2. Monitoring Well Location and Groundwater Elevation Contour Map - February 23, 2005 - Former Redwood Oil Bulk Plant, 105 X Street, Eureka, California

APPENDIX B
TABLES

Table 1. Monitoring Well Survey Data, Well Construction Details and Depth to Ground Water - 105 X Street, Eureka, California.

Well ID	Sample Date	DTW (Ft)	TOC (Ft, msl)	GWE (Ft, msl)	Screen Interval	Sand Pack Interval	Bentonite/Grout Interval	Notes
MW-1	5/14/2001	2.45	9.30	6.85	2 - 12	2 - 12	0 - 2	
	8/13/2001	2.92		6.38				
	11/9/2001	2.63		6.67				
	2/14/2002	1.84		7.46				
	5/1/2002	1.85		7.45				
	8/8/2002	2.91		6.39				
	11/15/2002	2.26		7.04				
	2/14/2003	1.78		7.52				
	5/23/2003	2.14		7.16				
	8/26/2003	2.85		6.45				
	11/17/2003	2.66		6.64				
	2/23/2004	1.38		7.92				
	5/13/2004	2.34		6.96				
	8/17/2004	2.76		6.54				
	11/23/2004	2.17		7.13				
	2/23/2005	1.68		7.62				
MW-2	5/14/2001	3.28	10.96	7.68	2 - 12	2 - 12	0 - 2	
	8/13/2001	3.63		7.33				
	11/9/2001	3.41		7.55				
	2/14/2002	2.90		8.06				
	5/1/2002	2.85		8.11				
	8/8/2002	3.71		7.25				
	11/15/2002	2.92		8.04				
	2/14/2003	2.88		8.08				
	5/23/2003	3.11		7.85				
	8/26/2003	3.65		7.31				
	11/17/2003	3.40		7.56				
	2/23/2004	2.45		8.51				
	5/13/2004	3.28		7.68				
	8/17/2004	3.49		7.47				
	11/23/2004	2.99		7.97				
	2/23/2005	3.86		7.10				

Table 1. Monitoring Well Survey Data, Well Construction Details and Depth to Ground Water - 105 X Street, Eureka, California.

Well ID	Sample Date	DTW (Ft)	TOC (Ft, msl)	GWE (Ft, msl)	Screen Interval	Sand Pack Interval	Bentonite/Grout Interval	Notes
MW-3	5/14/2001	2.81	10.37	7.56	2 - 12	2 - 12	0 - 2	
	8/13/2001	3.29		7.08				
	11/9/2001	2.98		7.39				
	2/14/2002	2.12		8.25				
	5/1/2002	1.99		8.38				
	8/8/2002	3.42		6.95				
	11/15/2002	2.44		7.93				
	2/14/2003	2.11		8.26				
	5/23/2003	2.38		7.99				
	8/26/2003	3.39		6.98				
	11/17/2003	2.60		7.77				
	2/23/2004	1.60		8.77				
	5/13/2004	2.72		7.65				
	8/17/2004	3.19		7.18				
	11/23/2004	2.29		8.08				
	2/23/2005	1.66		8.71				
MW-4	5/14/2001	3.19	11.20	8.01	2 - 12	2 - 12	0 - 2	
	8/13/2001	3.63		7.57				
	11/9/2001	3.39		7.81				
	2/14/2002	2.57		8.63				
	5/1/2002	2.42		8.78				
	8/8/2002	3.89		7.31				
	11/15/2002	3.12		8.08				
	2/14/2003	2.58		8.62				
	5/23/2003	2.88		8.32				
	8/26/2003	3.94		7.26				
	11/17/2003	3.10		8.10				
	2/23/2004	2.19		9.01				
	5/13/2004	3.14		8.06				
	8/17/2004	2.04		9.16				
	11/23/2004	2.93		8.27				
	2/23/2005	2.39		8.81				

Table 1. Monitoring Well Survey Data, Well Construction Details and Depth to Ground Water - 105 X Street, Eureka, California.

Well ID	Sample Date	DTW (Ft)	TOC (Ft, msl)	GWE (Ft, msl)	Screen Interval	Sand Pack Interval	Bentonite/Grout Interval	Notes
MW-5	2/14/2003	2.39	10.26	7.87	2 - 12	2 - 12	0 - 2	
	5/23/2003	2.66		7.60				
	8/26/2003	3.36		6.90				
	11/17/2003	3.09		7.17				
	2/23/2004	1.90		8.36				
	5/13/2004	2.93		7.33				
	8/17/2004	3.25		7.01				
	11/23/2004	2.64		7.62				
	2/23/2005	2.19		8.07				
MW-6	2/14/2003	2.03	9.69	7.66	2 - 12	2 - 12	0 - 2	
	5/23/2003	2.33		7.36				
	8/26/2003	3.03		6.66				
	11/17/2003	2.81		6.88				
	2/23/2004	1.56		8.13				
	5/13/2004	2.56		7.13				
	8/17/2004	2.96		6.73				
	11/23/2004	2.37		7.32				
	2/23/2005	2.17		7.52				

Explanation:

DTW = Depth to Water

ft = feet

TOC = Top of Casing

GWE = Ground Water Elevation

msl = Mean Sea Level

Table 2. Analytical Results for Ground Water - Monitoring Wells - 105 X Street, Eureka, California.

Sample ID	Date Sampled	TPPH (D)	TPPH(MO)	TPPH (G)	Benzene	Toluene	Ethylbenzene	Xylenes	Notes
		<----- ppb ----->							
MW-1	5/14/2001	<50	<170	<50	<0.5	<0.5	<0.5	<0.5	
	8/13/2001	<50	<170	<50	<0.5	<0.5	<0.5	<0.5	
	11/9/2001	<50	<170	<50	<0.5	<0.5	<0.5	0.51	
	2/14/2002	<50	<170	<50	<0.50	<0.50	<0.50	<0.50	
	5/1/2002	<50	<170	<50	<0.50	<0.50	<0.50	<0.50	
	8/8/2002	<50	<170	<50	<0.50	<0.50	<0.50	<0.50	
	11/15/2002	<50	<170	<50	<0.50	<0.50	<0.50	<0.50	
	2/14/2003	<50	<170	<50	<0.50	<0.50	<0.50	<0.50	
	8/26/2003	<50	<170	<50	<0.50	<0.50	<0.50	<0.50	
	2/23/2004	<50	<170	130	<0.50	<0.50	<0.50	<0.50	
	8/17/2004	<50	<170	<50	<0.50	<0.50	<0.50	<0.50	
	2/23/2005	---	---	230	---	---	---	---	Sample flagged by lab. See lab report for details.
MW-2	5/14/2001	190	<170	660	<0.5	<0.5	<0.5	<0.5	
	8/13/2001	140	<170	890	<0.5	<0.5	<0.5	<0.5	
	11/9/2001	<50	<170	300	<0.5	<0.5	<0.5	0.5	
	2/14/2002	<50	<170	<50	<0.50	<0.50	<0.50	<0.50	
	5/1/2002	<50	<170	180	<0.50	<0.50	<0.50	<0.50	
	8/8/2002	<50	<170	190	<0.50	<0.50	<0.50	<0.50	
	11/15/2002	<50	<170	290	<0.50	<0.50	<0.50	<0.50	
	2/14/2003	<50	<170	<50	<0.50	<0.50	<0.50	<0.50	
	8/26/2003	<50	<170	140	<0.50	<0.50	<0.50	<0.50	
	2/23/2004	<50	<170	<50	<0.50	<0.50	<0.50	0.5	
	8/17/2004	51	<170	240	<0.50	<0.50	<0.50	<0.50	
	2/23/2005	---	---	<50	---	---	---	---	
MW-3	5/14/2001	930	<170	2,900	28	45	140	69	
	8/13/2001	730	<170	3,600	31	49	140	99	
	11/9/2001	220	<170	2,700	26	39	120	78	
	2/14/2002	660	<170	3,400	20	59	120	82	
	5/1/2002	520	<170	3,600	15	52	150	107	
	8/8/2002	240	<170	1,200	13	17	53	29.7	
	11/15/2002	310	<170	1,900	13	20	64	44.9	
	2/14/2003	730	<170	5,400	31	88	210	112	

Table 2. Analytical Results for Ground Water - Monitoring Wells - 105 X Street, Eureka, California.

Sample ID	Date Sampled	TPPH (D)	TPPH(MO)	TPPH (G)	Benzene	Toluene	Ethylbenzene	Xylenes	Notes
		<----- ppb ----->							
MW-3	8/26/2003	200	<170	2,000	17	21	67	38.3	
	2/23/2004	360	<170	3,100	21	39	110	62.9	
	8/17/2004	110	<170	1,500	14	11	42	25.9	
	2/23/2005	---	---	1,600	2.8	8.6	69	28	
MW-4	5/14/2001	<50	<170	<50	<0.5	<0.5	<0.5	<0.5	
	8/13/2001	<50	<170	<50	<0.5	<0.5	<0.5	<0.5	
	11/9/2001	<50	<170	<50	<0.5	<0.5	<0.5	<0.5	
	2/14/2002	<50	<170	<50	<0.50	<0.50	<0.50	<0.50	
	5/1/2002	<50	<170	<50	<0.50	<0.50	<0.50	<0.50	
	8/8/2002	<50	<170	<50	<0.50	<0.50	<0.50	<0.50	
	11/15/2002	<50	<170	<50	<0.50	<0.50	<0.50	<0.50	
	2/14/2003	<50	<170	<50	<0.50	<0.50	<0.50	<0.50	
	8/26/2003	<50	<170	<50	<0.50	<0.50	<0.50	<0.50	
	2/23/2004	<50	<170	<50	<0.50	<0.50	<0.50	<0.50	
	8/17/2004	<50	<170	<50	<0.50	<0.50	<0.50	<0.50	
	2/23/2005	---	---	---	---	---	---	---	
MW-5	2/14/2003	89	<170	190	<0.50	<0.50	<0.50	<0.50	
	5/23/2003	110	<170	300	<0.50	<0.50	<0.50	<0.50	
	8/26/2003	<50	<170	170	<0.50	<0.50	<0.50	<0.50	
	11/17/2003	51	<170	230	<0.50	<0.50	<0.50	<0.50	
	2/23/2004	94	<170	260	<0.50	<0.50	<0.50	<0.50	
	5/13/2004	62	<170	170	<0.50	<0.50	<0.05	<0.50	
	8/17/2004	62	<170	190	<0.50	<0.50	<0.50	<0.50	
	11/23/2004	460	---	200	<0.5	<0.5	<0.5	<1	
	2/23/2005	---	---	320	---	---	---	---	Sample was flagged. See lab report for details

Table 2. Analytical Results for Ground Water - Monitoring Wells - 105 X Street, Eureka, California.

Sample ID	Date Sampled	TPPH (D)	TPPH(MO)	TPPH (G)	Benzene	Toluene	Ethylbenzene	Xylenes	Notes
		<----- ppb ----->							
MW-6	2/14/2003	<50	<170	<50	<0.50	<0.50	<0.50	<0.50	
	5/23/2003	<50	<170	58	<0.50	<0.50	<0.50	<0.50	
	8/26/2003	<50	<170	<50	<0.50	<0.50	<0.50	<0.50	
	11/17/2003	<50	<170	<50	<0.50	<0.50	<0.50	<0.50	
	2/23/2004	<50	<170	<50	<0.50	<0.50	<0.50	<0.50	
	5/13/2004	<50	<170	<50	<0.50	<0.50	<0.50	<0.50	
	8/17/2004	<50	<170	<50	<0.50	<0.50	<0.50	<0.50	
	11/23/2004	<50	---	25	<0.5	<0.5	<0.5	<1	
	2/23/2005	---	---	---	---	---	---	---	

Explanation:

TPH(D) = Total Petroleum Hydrocarbons as Diesel

TPH(MO) = Total Petroleum Hydrocarbons as Motor Oil

TPH(G) = Total Petroleum Hydrocarbons as Gasoline

ppb = parts per billion

Table 3. Analytical Results for Ground Water - Oxygenates - 105 X Street, Eureka, California.

Sample ID	Sample Date	t-Butyl alcohol (TBA)	MTBE	Diisopropyl ether (DIPE)	Ethyl t-butyl ether (ETBE)	t-Amyl methyl ether (TAME)	Notes
MW-1	5/14/2001	<10.0	3.9	<1.0	<1.0	<1.0	
	8/13/2001	<20	11	<1.0	<1.0	<1.0	
	11/9/2001	<20	14	<1.0	<1.0	<1.0	
	2/14/2002	<20	3.3	<1.0	<1.0	<1.0	
	5/1/2002	<20	3	<1.0	<1.0	<1.0	
	8/8/2002	<20	14	<1.0	<1.0	<1.0	
	11/15/2002	<20	3.8	<1.0	<1.0	<1.0	
	2/14/2003	<20	48	<1.0	<1.0	8.4	
	8/26/2003	<20	12	<1.0	<1.0	<1.0	
	2/23/2004	<10	76	<1.0	<1.0	42	
	8/17/2004	<10	8.1	<1.0	<1.0	<1.0	
	2/23/2005		220				
	4/21/2005		110				
MW-2	5/14/2001	16	73	<1.0	<1.0	<1.0	
	8/13/2001	<20	130	<1.0	<1.0	1.2	
	11/9/2001	<20	98	<1.0	<1.0	<1.0	
	2/14/2002	<20	12	<1.0	<1.0	<1.0	
	5/1/2002	22	120	<1.0	<1.0	<1.0	
	8/8/2002	<20	53	<1.0	<1.0	<1.0	
	11/15/2002	<20	29	<1.0	<1.0	<1.0	
	2/14/2003	<20	36	<1.0	<1.0	<1.0	
	8/26/2003	<20	21	<1.0	<1.0	<1.0	
	2/23/2004	<10	<1.0	<1.0	<1.0	<1.0	
	8/17/2004	<10	9.2	<1.0	<1.0	<1.0	
	2/23/2005		16				

Table 3. Analytical Results for Ground Water - Oxygenates - 105 X Street, Eureka, California.

Sample ID	Sample Date	t-Butyl alcohol (TBA)	MTBE	Diisopropyl ether (DIPE)	Ethyl t-butyl ether (ETBE)	t-Amyl methyl ether (TAME)	Notes
MW-3	5/14/2001	<50	8.1	<2.5	<2.5	<2.5	
	8/13/2001	<20	<20	<1.0	<1.0	<1.0	
	11/9/2001	<20	<20	<1.0	<1.0	<1.0	
	2/14/2002	<20	4.9	<1.0	<1.0	<1.0	
	5/1/2002	<20	4.4	<1.0	<1.0	<1.0	
	8/8/2002	<20	6.3	<10	<1.0	1.4	
	11/15/2002	<20	6.1	<1.0	<1.0	<3.0	
	2/14/2003	<20	<12	<1.0	<1.0	<1.0	
	8/26/2003	<20	<10	<1.0	<1.0	1.2	
	2/23/2004	<10	<6.0	<1.0	<1.0	<1.0	
	8/17/2004	<10	<8.0	<1.0	<1.0	<1.0	
	2/23/2005		6.0				
MW-4	5/14/2001	<10.0	<0.50	<1.0	<1.0	<1.0	
	8/13/2001	<20	<1.0	<1.0	<1.0	<1.0	
	11/9/2001	<20	<1.0	<1.0	<1.0	<1.0	
	2/14/2002	<20	<1.0	<1.0	<1.0	<1.0	
	5/1/2002	<20	<1.0	<1.0	<1.0	<1.0	
	8/8/2002	<20	5.9	<1.0	<1.0	<1.0	
	11/15/2002	<20	4.7	<1.0	<1.0	<1.0	
	2/14/2003	<20	8.8	<1.0	<1.0	<1.0	
	8/26/2003	<20	6.9	<1.0	<1.0	<1.0	
	2/23/2004	<10	6.7	<1.0	<1.0	<1.0	
	8/17/2004	<10	4	<1.0	<1.0	<1.0	
	2/23/2005		3.1				
MW-5	2/14/2003	<20	32	<1.0	<1.0	<1.0	
	5/23/2003	<20	52	<1.0	<1.0	1	
	8/26/2003	<20	43	<1.0	<1.0	<1.0	
	11/17/2003	<20	57	<1.0	<1.0	1.6	
	2/23/2004	<10	20	<1.0	<1.0	<1.0	
	5/13/2004	<10	22	<1.0	<1.0	<1.0	
	8/17/2004	<10	55	<1.0	<1.0	2.6	
	11/23/2004	<10	33	<5	<5	<5	
	2/23/2005		8.8				

Table 3. Analytical Results for Ground Water - Oxygenates - 105 X Street, Eureka, California.

Sample ID	Sample Date	t-Butyl alcohol (TBA)	MTBE	Diisopropyl ether (DIPE)	Ethyl t-butyl ether (ETBE)	t-Amyl methyl ether (TAME)	Notes
MW-6	2/14/2003	<20	10	<1.0	<1.0	<1.0	
	5/23/2003	<20	41	<1.0	<1.0	1.7	
	8/26/2003	<20	25	<1.0	<1.0	<1.0	
	11/17/2003	<20	25	<1.0	<1.0	<1.0	
	2/23/2004	<10	5.3	<1.0	<1.0	<1.0	
	5/13/2004	<10	15	<1.0	<1.0	<1.0	
	8/17/2004	<10	25	<1.0	<1.0	<1.0	
	11/23/2004	<10	19	<5	<5	<5	
	2/23/2005		9.8				

Explanation:

MTBE = Methyl Tertiary-butyl Ether

APPENDIX C
LABORATORY ANALYTICAL RESULTS AND CHAIN OF CUSTODY RECORD

Entech Analytical Labs, Inc.

3334 Victor Court • Santa Clara, CA 95054 • (408) 588-0200 • Fax (408) 588-0201

David
ECM Group
290 W. Channel Rd.
Benicia, CA 94510

Certificate ID: 42549 - 3/9/2005 4:28:00 PM

Order Number: 42549
Project Name: Eureka
Project Number: 99-110-04

Date Received: 2/24/2005 1:50:49 PM
P.O. Number: 99-110-04

Certificate of Analysis - Revision

Note: Report re-issued on 3/9/05 to report TPH as Gasoline and MTBE for sample 42549-003

On February 24, 2005, samples were received under chain of custody for analysis. Entech analyzes samples "as received" unless otherwise noted. The following results are included:

<u>Matrix</u>	<u>Test</u>	<u>Method</u>	<u>Comments</u>
Liquid	8260Petroleum	EPA 8260B	
	TPH as Gasoline	EPA 8015 MOD. (Purgeable)	
	TPH as Gasoline - GC/MS	GC-MS	

Entech Analytical Labs, Inc. is certified for environmental analyses by the State of California (#2346).
If you have any questions regarding this report, please call us at 408-588-0200 ext. 225.

Sincerely,



Laurie Glantz-Murphy
Laboratory Director

Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054

Phone: (408) 588-0200

Fax: (408) 588-0201

ECM Group
290 W. Channel Rd.
Benicia, CA 94510
Attn: David

Project Number: 99-110-04
Project Name: Eureka
Date Received: 2/24/2005
P.O. Number: 99-110-04
Sample Collected by: Client

Certificate of Analysis - Data Report

Lab # : 42549-001 Sample ID: MW-1

Matrix: Liquid Sample Date: 2/23/2005 2:36 PM

Method: EPA 8015 MOD. (Purgeable)

Prep Method: EPA 5030B - Purge-and-Trap for Aqueous Samples

Parameter	Result	Flag	DF	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
TPH as Gasoline	230		1	50	µg/L	N/A	N/A	02/28/2005	WGC4050228

Note: TPH as Gasoline reported value is the result of high concentration of MTBE within the TPH as Gasoline quantitation range.

Surrogate	Surrogate Recovery	Control Limits (%)	Analyzed by: mruan
4-Bromofluorobenzene	99.9	65 - 135	Reviewed by: MTU

Method: EPA 8260B - Gas Chromatography/Mass Spectrometry (GC/MS)

Prep Method: EPA 5030B - Purge-and-Trap for Aqueous Samples

Parameter	Result	Flag	DF	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
Methyl-t-butyl Ether	220		5	5	µg/L	N/A	N/A	03/01/2005	WMS1050228

Surrogate	Surrogate Recovery	Control Limits (%)	Analyzed by: Xbian
4-Bromofluorobenzene	97.4	75 - 125	Reviewed by: MTU
Dibromofluoromethane	121	75 - 125	
Toluene-d8	108	75 - 125	

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Attn: David

Project Number: 99-110-04
Project Name: Eureka
Date Received: 2/24/2005
P.O. Number: 99-110-04
Sample Collected by: Client

Certificate of Analysis - Data Report

Lab # : 42549-002 Sample ID: MW-2

Matrix: Liquid Sample Date: 2/23/2005 12:35 PM

Method: EPA 8015 MOD. (Purgeable)

Prep Method: EPA 5030B - Purge-and-Trap for Aqueous Samples

Parameter	Result	Flag	DF	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
TPH as Gasoline	ND		1	50	µg/L	N/A	N/A	02/28/2005	WGC4050228

Surrogate	Surrogate Recovery	Control Limits (%)	Analyzed by:
4-Bromofluorobenzene	118	65 - 135	mruan

Method: EPA 8260B - Gas Chromatography/Mass Spectrometry (GC/MS)

Prep Method: EPA 5030B - Purge-and-Trap for Aqueous Samples

Parameter	Result	Flag	DF	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
Methyl-t-butyl Ether	16		1	1	µg/L	N/A	N/A	02/25/2005	WMS1050225

Surrogate	Surrogate Recovery	Control Limits (%)	Analyzed by:
4-Bromofluorobenzene	107	75 - 125	Xbian
Dibromofluoromethane	105	75 - 125	Reviewed by: MTU
Toluene-d8	102	75 - 125	

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Attn: David

Project Number: 99-110-04
Project Name: Eureka
Date Received: 2/24/2005
P.O. Number: 99-110-04
Sample Collected by: Client

Certificate of Analysis - Data Report

Lab # : 42549-003 Sample ID: MW-3 Matrix: Liquid Sample Date: 2/23/2005 1:17 PM

Method: EPA 8260B - Gas Chromatography/Mass Spectrometry (GC/MS)

Prep Method: EPA 5030B - Purge-and-Trap for Aqueous Samples

Parameter	Result	Flag	DF	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
Benzene	2.8		5	2.5	µg/L	N/A	N/A	03/01/2005	WMS1050228
Toluene	8.6		5	2.5	µg/L	N/A	N/A	03/01/2005	WMS1050228
Ethyl Benzene	69		5	2.5	µg/L	N/A	N/A	03/01/2005	WMS1050228
Xylenes, Total	28		5	2.5	µg/L	N/A	N/A	03/01/2005	WMS1050228
Methyl-t-butyl Ether	6.0		5	5	µg/L	N/A	N/A	03/01/2005	WMS1050228

Surrogate Surrogate Recovery Control Limits (%) Analyzed by: Xbian

4-Bromofluorobenzene	99.7	75 - 125	Reviewed by: MTU
Dibromofluoromethane	107	75 - 125	
Toluene-d8	102	75 - 125	

Method: GC-MS - Gas Chromatography/Mass Spectrometry (GC/MS)

Prep Method: EPA 5030B - Purge-and-Trap for Aqueous Samples

Parameter	Result	Flag	DF	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
TPH as Gasoline	1600		5	130	µg/L	N/A	N/A	03/01/2005	WMS1050228

Surrogate Surrogate Recovery Control Limits (%) Analyzed by: XBian

4-Bromofluorobenzene	101	75 - 125	Reviewed by: MTU
Dibromofluoromethane	112	75 - 125	
Toluene-d8	106	75 - 125	

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Attn: David

Project Number: 99-110-04
Project Name: Eureka
Date Received: 2/24/2005
P.O. Number: 99-110-04
Sample Collected by: Client

Certificate of Analysis - Data Report

Lab # : 42549-004 Sample ID: MW-4

Matrix: Liquid Sample Date: 2/23/2005 3:25 PM

Method: EPA 8260B - Gas Chromatography/Mass Spectrometry (GC/MS)

Prep Method: EPA 5030B - Purge-and-Trap for Aqueous Samples

Parameter	Result	Flag	DF	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
Methyl-t-butyl Ether	3.1		1	1	µg/L	N/A	N/A	02/25/2005	WMS1050225

Surrogate	Surrogate Recovery	Control Limits (%)	Analyzed by: Xbian
4-Bromofluorobenzene	102	75 - 125	Reviewed by: MTU
Dibromofluoromethane	104	75 - 125	
Toluene-d8	102	75 - 125	

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Attn: David

Project Number: 99-110-04
Project Name: Eureka
Date Received: 2/24/2005
P.O. Number: 99-110-04
Sample Collected by: Client

Certificate of Analysis - Data Report

Lab #: 42549-005 Sample ID: MW-5

Matrix: Liquid Sample Date: 2/23/2005 11:40 AM

Method: EPA 8015 MOD. (Purgeable)

Prep Method: EPA 5030B - Purge-and-Trap for Aqueous Samples

Parameter	Result	Flag	DF	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
TPH as Gasoline	320		1	50	µg/L	N/A	N/A	02/25/2005	WGC4050225

Note: TPH as Gasoline reported value is a result of an atypical Gasoline.

Surrogate	Surrogate Recovery	Control Limits (%)	Analyzed by: mruan
4-Bromofluorobenzene	108	65 - 135	Reviewed by: MTU

Method: EPA 8260B - Gas Chromatography/Mass Spectrometry (GC/MS)

Prep Method: EPA 5030B - Purge-and-Trap for Aqueous Samples

Parameter	Result	Flag	DF	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
Methyl-t-butyl Ether	8.8		1	1	µg/L	N/A	N/A	03/01/2005	WMS1050228

Surrogate	Surrogate Recovery	Control Limits (%)	Analyzed by: Xbian
4-Bromofluorobenzene	121	75 - 125	Reviewed by: MTU
Dibromofluoromethane	108	75 - 125	
Toluene-d8	104	75 - 125	

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Attn: David

Project Number: 99-110-04
Project Name: Eureka
Date Received: 2/24/2005
P.O. Number: 99-110-04
Sample Collected by: Client

Certificate of Analysis - Data Report

Lab #: 42549-006 Sample ID: MW-6 Matrix: Liquid Sample Date: 2/23/2005 1:52 PM

Method: EPA 8260B - Gas Chromatography/Mass Spectrometry (GC/MS)

Prep Method: EPA 5030B - Purge-and-Trap for Aqueous Samples

Parameter	Result	Flag	DF	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
Methyl-t-butyl Ether	9.8		1	1	µg/L	N/A	N/A	02/25/2005	WMS1050225
Surrogate Surrogate Recovery Control Limits (%)									
4-Bromofluorobenzene	104		75	-	125				Reviewed by: MTU
Dibromofluoromethane	107		75	-	125				
Toluene-d8	101		75	-	125				

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Quality Control - Method Blank

Liquid

Validated by: MTU - 03/01/05

QC Batch ID: WGC4050225

Analysis Date: 2/25/2005

Method Blank Method: EPA 8015 MOD. (Purgeable)

Parameter	Result	DF	PQLR	Units
TPH as Gasoline	ND	1	50	µg/L

Surrogate for Blank % Recovery Control Limits

4-Bromofluorobenzene	96.8	65	-	135
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Quality Control - Laboratory Control Spike / Duplicate Results Liquid

Reviewed by: MTU - 03/01/05

QC Batch ID: WGC4050225

Analysis Date: 2/25/2005

LCS	Method: EPA 8015 MOD. (Purgeable)						Conc. Units: µg/L		
Parameter	Blank (MDL)	Spike Amt	SpikeResult	QC Type	Analysis Date	% Recovery	RPD	RPD Limits	Recovery Limits
TPH as Gasoline	<4	250.0	250	LCS	2/25/2005	102			65 - 135

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	95.8	65 - 135

LCSD	Method: EPA 8015 MOD. (Purgeable)						Conc. Units: µg/L		
Parameter	Blank (MDL)	Spike Amt	SpikeResult	QC Type	Analysis Date	% Recovery	RPD	RPD Limits	Recovery Limits
TPH as Gasoline	<4	250.0	210	LCSD	2/25/2005	84.9	18	25.0	65 - 135

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	98.7	65 - 135

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Quality Control - Method Blank

Liquid

Validated by: MTU - 03/02/05

QC Batch ID: WGC4050228

Analysis Date: 2/28/2005

Method Blank Method: EPA 8015 MOD. (Purgeable)

Parameter	Result	DF	PQLR	Units
TPH as Gasoline	ND	1	50	µg/L

Surrogate for Blank % Recovery Control Limits

4-Bromofluorobenzene	94.8	65	-	135
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Quality Control - Laboratory Control Spike / Duplicate Results

Liquid

Reviewed by: MTU - 03/02/05

QC Batch ID: WGC4050228

Analysis Date: 2/28/2005

LCS	Method: EPA 8015 MOD. (Purgeable)						Conc. Units: µg/L		
Parameter	Blank (MDL)	Spike Amt	SpikeResult	QC Type	Analysis Date	% Recovery	RPD	RPD Limits	Recovery Limits
TPH as Gasoline	<4	250.0	250	LCS	2/28/2005	99.1			65 - 135

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	97.9	65 - 135

LCSD	Method: EPA 8015 MOD. (Purgeable)						Conc. Units: µg/L		
Parameter	Blank (MDL)	Spike Amt	SpikeResult	QC Type	Analysis Date	% Recovery	RPD	RPD Limits	Recovery Limits
TPH as Gasoline	<4	250.0	280	LCSD	2/28/2005	110	11	25.0	65 - 135

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	98.1	65 - 135

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Quality Control - Method Blank

Liquid

Validated by: MTU - 02/28/05

QC Batch ID: WMS1050225

Analysis Date: 2/25/2005

Method Blank Method: EPA 8260B

Parameter	Result	DF	PQLR	Units
Methyl-t-butyl Ether	ND	1	1	µg/L

Surrogate for Blank % Recovery Control Limits

4-Bromofluorobenzene	101	75	-	125
Dibromofluoromethane	105	75	-	125
Toluene-d8	103	75	-	125

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Quality Control - Laboratory Control Spike / Duplicate Results

Liquid

Reviewed by: MTU - 02/28/05

QC Batch ID: WMS1050225

Analysis Date: 2/25/2005

LCS	Method:	Conc. Units: µg/L								
Parameter	EPA 8260B	Blank (MDL)	Spike Amt	SpikeResult	QC Type	Analysis Date	% Recovery	RPD	RPD Limits	Recovery Limits
Benzene		<0.2	20.0	18	LCS	2/25/2005	88.0			80 - 120
Methyl-t-butyl Ether		<0.3	20.0	21	LCS	2/25/2005	103			80 - 120
Toluene		<0.2	20.0	19	LCS	2/25/2005	93.0			80 - 120

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	101	75 - 125
Dibromofluoromethane	107	75 - 125
Toluene-d8	97.9	75 - 125

LCSD	Method:	Conc. Units: µg/L								
Parameter	EPA 8260B	Blank (MDL)	Spike Amt	SpikeResult	QC Type	Analysis Date	% Recovery	RPD	RPD Limits	Recovery Limits
Benzene		<0.2	20.0	17	LCSD	2/25/2005	84.5	4.1	25.0	80 - 120
Methyl-t-butyl Ether		<0.3	20.0	22	LCSD	2/25/2005	108	4.8	25.0	80 - 120
Toluene		<0.2	20.0	18	LCSD	2/25/2005	88.0	5.5	25.0	80 - 120

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	101	75 - 125
Dibromofluoromethane	108	75 - 125
Toluene-d8	96.7	75 - 125

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Quality Control - Method Blank

Liquid

Validated by: MTU - 03/01/05

QC Batch ID: WMS1050228

Analysis Date: 2/28/2005

Method Blank	Method: EPA 8260B	Result	DF	PQLR	Units
Parameter					
1,1,1,2-Tetrachloroethane	ND	1	0.5	µg/L	
1,1,1-Trichloroethane	ND	1	0.5	µg/L	
1,1,2,2-Tetrachloroethane	ND	1	0.5	µg/L	
1,1,2-Trichloroethane	ND	1	0.5	µg/L	
1,1-Dichloroethane	ND	1	0.5	µg/L	
1,1-Dichloroethene	ND	1	0.5	µg/L	
1,1-Dichloropropene	ND	1	0.5	µg/L	
1,2,3-Trichlorobenzene	ND	1	5	µg/L	
1,2,3-Trichloropropane	ND	1	0.5	µg/L	
1,2,4-Trichlorobenzene	ND	1	5	µg/L	
1,2,4-Trimethylbenzene	ND	1	5	µg/L	
1,2-Dibromo-3-Chloropropane	ND	1	5	µg/L	
1,2-Dibromoethane (EDB)	ND	1	0.5	µg/L	
1,2-Dichlorobenzene	ND	1	0.5	µg/L	
1,2-Dichloroethane	ND	1	0.5	µg/L	
1,2-Dichloropropane	ND	1	0.5	µg/L	
1,3,5-Trimethylbenzene	ND	1	5	µg/L	
1,3-Dichlorobenzene	ND	1	0.5	µg/L	
1,3-Dichloropropane	ND	1	0.5	µg/L	
1,4-Dichlorobenzene	ND	1	0.5	µg/L	
1,4-Dioxane	ND	1	50	µg/L	
2,2-Dichloropropane	ND	1	0.5	µg/L	
2-Butanone (MEK)	ND	1	20	µg/L	
2-Chloroethyl-vinyl Ether	ND	1	5	µg/L	
2-Chlorotoluene	ND	1	5	µg/L	
2-Hexanone	ND	1	20	µg/L	
4-Chlorotoluene	ND	1	5	µg/L	
4-Methyl-2-Pentanone(MIBK)	ND	1	20	µg/L	
Acetone	ND	1	20	µg/L	
Acetonitrile	ND	1	5	µg/L	
Acrolein	ND	1	5	µg/L	
Acrylonitrile	ND	1	5	µg/L	
Benzene	ND	1	0.5	µg/L	
Benzyl Chloride	ND	1	5	µg/L	
Bromobenzene	ND	1	0.5	µg/L	
Bromochloromethane	ND	1	0.5	µg/L	
Bromodichloromethane	ND	1	0.5	µg/L	
Bromoform	ND	1	0.5	µg/L	
Bromomethane	ND	1	0.5	µg/L	
Carbon Disulfide	ND	1	0.5	µg/L	
Carbon Tetrachloride	ND	1	0.5	µg/L	
Chlorobenzene	ND	1	0.5	µg/L	
Chloroethane	ND	1	0.5	µg/L	
Chloroform	ND	1	0.5	µg/L	
Chloromethane	ND	1	0.5	µg/L	

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Quality Control - Method Blank

Liquid

Validated by: MTU - 03/01/05

QC Batch ID: WMS1050228

Analysis Date: 2/28/2005

Method Blank	Method: EPA 8260B			
Parameter	Result	DF	PQLR	Units
cis-1,2-Dichloroethene	ND	1	0.5	µg/L
cis-1,3-Dichloropropene	ND	1	0.5	µg/L
Cyclohexanone	ND	1	20	µg/L
Dibromochloromethane	ND	1	0.5	µg/L
Dibromomethane	ND	1	0.5	µg/L
Dichlorodifluoromethane	ND	1	0.5	µg/L
Diisopropyl Ether	ND	1	5	µg/L
Ethyl Benzene	ND	1	0.5	µg/L
Freon 113	ND	1	5	µg/L
Hexachlorobutadiene	ND	1	5	µg/L
Iodomethane	ND	1	1	µg/L
Isopropanol	ND	1	20	µg/L
Isopropylbenzene	ND	1	1	µg/L
Methyl-t-butyl Ether	ND	1	1	µg/L
Methylene Chloride	ND	1	5	µg/L
n-Butylbenzene	ND	1	5	µg/L
n-Propylbenzene	ND	1	5	µg/L
Naphthalene	ND	1	5	µg/L
p-Isopropyltoluene	ND	1	5	µg/L
Pentachloroethane	ND	1	0.5	µg/L
sec-Butylbenzene	ND	1	5	µg/L
Styrene	ND	1	0.5	µg/L
tert-Amyl Methyl Ether	ND	1	5	µg/L
tert-Butanol (TBA)	ND	1	10	µg/L
tert-Butyl Ethyl Ether	ND	1	5	µg/L
tert-Butylbenzene	ND	1	5	µg/L
Tetrachloroethene	ND	1	0.5	µg/L
Tetrahydrofuran	ND	1	20	µg/L
Toluene	ND	1	0.5	µg/L
trans-1,2-Dichloroethene	ND	1	0.5	µg/L
trans-1,3-Dichloropropene	ND	1	0.5	µg/L
trans-1,4-Dichloro-2-butene	ND	1	1	µg/L
Trichloroethene	ND	1	0.5	µg/L
Trichlorofluoromethane	ND	1	0.5	µg/L
Vinyl Acetate	ND	1	5	µg/L
Vinyl Chloride	ND	1	0.5	µg/L
Xylenes, Total	ND	1	0.5	µg/L
Surrogate for Blank	% Recovery	Control Limits		
4-Bromofluorobenzene	104	75 - 125		
Dibromofluoromethane	109	75 - 125		
Toluene-d8	105	75 - 125		

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Quality Control - Method Blank

Liquid

Validated by: MTU - 03/01/05

QC Batch ID: WMS1050228

Analysis Date: 2/28/2005

Method Blank Method: GC-MS

Parameter	Result	DF	PQLR	Units
TPH as Gasoline	ND	1	25	µg/L

Surrogate for Blank % Recovery Control Limits

4-Bromofluorobenzene	106	75	-	125
Dibromofluoromethane	113	75	-	125
Toluene-d8	109	75	-	125

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Quality Control - Laboratory Control Spike / Duplicate Results Liquid

Reviewed by: MTU - 03/01/05

QC Batch ID: WMS1050228

Analysis Date: 2/28/2005

LCS	Method: EPA 8260B	Conc. Units: µg/L								
		Parameter	Blank (MDL)	Spike Amt	SpikeResult	QC Type	Analysis Date	% Recovery	RPD	RPD Limits
1,1-Dichloroethene		<0.2	20.0	17	LCS	2/28/2005	84.0			80 - 120
Benzene		<0.2	20.0	18	LCS	2/28/2005	88.0			80 - 120
Chlorobenzene		<0.2	20.0	20	LCS	2/28/2005	99.0			80 - 120
Methyl-t-butyl Ether		<0.3	20.0	23	LCS	2/28/2005	114			80 - 120
Toluene		<0.2	20.0	19	LCS	2/28/2005	93.0			80 - 120
Trichloroethylene		<0.2	20.0	19	LCS	2/28/2005	95.0			80 - 120

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	101	75 - 125
Dibromofluoromethane	113	75 - 125
Toluene-d8	97.9	75 - 125

LCSD	Method: EPA 8260B	Conc. Units: µg/L							
Parameter	Blank (MDL)	Spike Amt	SpikeResult	QC Type	Analysis Date	% Recovery	RPD	RPD Limits	Recovery Limits
1,1-Dichloroethene	<0.2	20.0	16	LCSD	2/28/2005	82.0	2.4	25.0	80 - 120
Benzene	<0.2	20.0	17	LCSD	2/28/2005	87.0	1.1	25.0	80 - 120
Chlorobenzene	<0.2	20.0	20	LCSD	2/28/2005	98.0	1.0	25.0	80 - 120
Methyl-t-butyl Ether	<0.3	20.0	22	LCSD	2/28/2005	111	3.1	25.0	80 - 120
Toluene	<0.2	20.0	19	LCSD	2/28/2005	93.0	0.0	25.0	80 - 120
Trichloroethylene	<0.2	20.0	19	LCSD	2/28/2005	94.0	1.1	25.0	80 - 120

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	100	75 - 125
Dibromofluoromethane	109	75 - 125
Toluene-d8	99.5	75 - 125

LCS	Method: GC-MS	Conc. Units: µg/L							
Parameter	Blank (MDL)	Spike Amt	SpikeResult	QC Type	Analysis Date	% Recovery	RPD	RPD Limits	Recovery Limits
TPH as Gasoline	<6	125.0	130	LCS	2/28/2005	103			65 - 135

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	106	75 - 125
Dibromofluoromethane	113	75 - 125
Toluene-d8	107	75 - 125

LCSD	Method: GC-MS	Conc. Units: µg/L							
Parameter	Blank (MDL)	Spike Amt	SpikeResult	QC Type	Analysis Date	% Recovery	RPD	RPD Limits	Recovery Limits
TPH as Gasoline	<6	125.0	130	LCSD	2/28/2005	102	0.94	25.0	65 - 135

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	105	75 - 125
Dibromofluoromethane	113	75 - 125
Toluene-d8	107	75 - 125

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Quality Control - Matrix Spike / Duplicate Results Liquid

Reviewed by: MTU - 03/01/05

QC Batch ID: WMS1050228

Analysis Date: 2/28/2005

Method EPA 8260B		Conc. Units: µg/L							
Parameter	Sample Result	Spike Amount	Spike Result	QC Type	Analysis Date	% Recovery	RPD	RPD Limits	Recovery Limits
MS SampleNumber: 42585-001									
1,1-Dichloroethene	ND	20	15.9	MS	2/28/2005	79.5		65 - 135	
Benzene	ND	20	16.4	MS	2/28/2005	82.0		65 - 135	
Chlorobenzene	ND	20	18.3	MS	2/28/2005	91.5		65 - 135	
Methyl-t-butyl Ether	ND	20	19.8	MS	2/28/2005	99.0		65 - 135	
Toluene	ND	20	17.6	MS	2/28/2005	88.0		65 - 135	
Trichloroethene	ND	20	17.5	MS	2/28/2005	87.5		65 - 135	
Surrogate		% Recovery	Control Limits						
4-Bromofluorobenzene	100	75 - 125							
Dibromofluoromethane	112	75 - 125							
Toluene-d8	100	75 - 125							
MSD SampleNumber: 42585-001									
1,1-Dichloroethene	ND	20	17.1	MSD	2/28/2005	85.5	7.3	25	65 - 135
Benzene	ND	20	17.5	MSD	2/28/2005	87.5	6.5	25	65 - 135
Chlorobenzene	ND	20	18.9	MSD	2/28/2005	94.5	3.2	25	65 - 135
Methyl-t-butyl Ether	ND	20	22.5	MSD	2/28/2005	113	12.8	25	65 - 135
Toluene	ND	20	18.6	MSD	2/28/2005	93.0	5.5	25	65 - 135
Trichloroethene	ND	20	17.9	MSD	2/28/2005	89.5	2.3	25	65 - 135
Surrogate		% Recovery	Control Limits						
4-Bromofluorobenzene	97.9	75 - 125							
Dibromofluoromethane	115	75 - 125							
Toluene-d8	103	75 - 125							

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Santa Clara, CA 95054

Chain of Custody / Analysis Request

Attention to: David Phone No.: 707 751 0655 Purchase Order No (Req'd.): Send Invoice to (if Different) Redwood Oil Company

Company Name: ECM Group Project Number: 99 110 04 Company:

Mailing Address: P.O. Box 802 Project Name: Eureka Billing Address (if Different)

City: Brentwood Project Location:

State: CA Zip: 94510 City:

Sample# JWS Field Org. Code: Turn Around Time

- Same Day 1 Day
- 2 Day 3 Day
- 4 Day 5 Day
- Standard (10 Day)

Order ID:	Sampling			Preservative			Containers	Composite	Matrix	Grab	Oily	CN	TPH	STC	Metals - Circle Below Dissolved	Total	Remarks
	Client ID:	Field PT	Lab. No.	Date	Time												
MW-1	42549-001	22365	236			X											
MW-2	002	1235				X											
MW-3	003	117				X											
MW-4	004	325				X											
MW-5	005	1140				X											
MW-6	006	152				V											

<input type="checkbox"/> NPDES Detection Limits	<input type="checkbox"/> EDD Report Required
<input type="checkbox"/> EDF Report Required	<input checked="" type="checkbox"/> PDF File Required
<input type="checkbox"/> PDM File Required	<input type="checkbox"/> LUFT-5
Special Instructions or Comments	
Only report BTEX for MW-3	
Metals:	Al, As, Sb, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Mo, Ni, K, Si, Ag, Na, Se, Sr, Ti, Sn, Ti, V, Zn, W:
Received by:	<u>Jeff Jansen</u>
Date:	<u>2/24/05</u>
Received by:	<u>Jeff Jansen</u>
Date:	<u>2/24/05</u>
Received by:	<u>Jeff Jansen</u>
Date:	<u>2/24/05</u>
Received by:	<u>Jeff Jansen</u>
Date:	<u>2/24/05</u>

Entech Analytical Labs, Inc.

(408) 588-0200

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3334 Victor Court

Santa Clara, CA 95054

Chain of Custody / Analysis Request

Attention to:	Phone No.:		Purchase Order No. (Reqd.):		Send Invoice to (if Different)	
David	707-751-0655		Project Number:		Redwood Oil Company	
Company Name:	Fax No.:		Project Name:		Company	
ECM Group	707-751-0653		Eureka		Billing Address (if Different)	
Mailing Address:	email: ecmgrps@aol.com		Project Location:			
PO Box 802	State: CA		City: 94510		City:	
City:	Zip:		City:		State / Zip	
Sample ID:	Field Org. Code:	Turn Around Time		Preservative		Remarks
Jeff S.		<input type="checkbox"/> Same Day	<input type="checkbox"/> 1 Day	<input type="checkbox"/> Motor Oil w/ Slight Standard Change	<input type="checkbox"/> TLC	
		<input type="checkbox"/> 2 Day	<input type="checkbox"/> 3 Day	<input type="checkbox"/> Diesel Extractable	<input type="checkbox"/> Dissolved	
		<input type="checkbox"/> 4 Day	<input type="checkbox"/> 5 Day	<input type="checkbox"/> Purgeable	<input type="checkbox"/> Grease	
		<input type="checkbox"/> Standard (10 Day)		<input type="checkbox"/> PCBs	<input type="checkbox"/> Metals, Circle Below	
Order ID:	Sampling		Composite		Containers	
Client ID:	Field PT	Lab. No.	Date	Time	Matrix	
MW-1	42541-001		2/23/05	2:36		X
MW-2		002		12:35		X
MW-3		003		11:17		X
MW-4		004		3:25		X
MW-5		005		11:40		X
MW-6		006		1:55		X
				15:2		
Received by:	<i>Jeff S.</i>		Date/time:		2/24/05 1:55	
Released by:	<i>Jeff S.</i>		Date/time:		2/24/05 1:55	
Relinquished by:	<i>Jeff S.</i>		Date/time:		2/24/05 1:55	
Relinquished by:	<i>Jeff S.</i>		Date/time:		2/24/05 1:55	
Special Instructions or Comments						
<input type="checkbox"/> NPDES Detection Limits <input type="checkbox"/> EDD Report Required <input checked="" type="checkbox"/> EDF Report Required <input type="checkbox"/> PDF File Required <input type="checkbox"/> PPM-13 <input type="checkbox"/> Plating <input type="checkbox"/> CAM-17 <input type="checkbox"/> RCRA-8 <input type="checkbox"/> Only report BTX for MW-3 <input type="checkbox"/> TI, Sn, Ti, V, Zn, W : <input type="checkbox"/> LUFT-5						

Entech Analytical Labs, Inc.

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Chris Bramer
ECM Group
290 W. Channel Rd.
Benicia, CA 94510

Certificate ID: 43311 - 4/29/2005 3:58:41 PM

Order Number: 43311
Project Name: Eureka
Project Number: 99-110-04

Date Received: 4/26/2005 12:21:19 PM
P.O. Number: 99-110-04

Certificate of Analysis - Final Report

On April 26, 2005, sample was received under chain of custody for analysis. Entech analyzes samples "as received" unless otherwise noted. The following class of analyses are included:

<u>Matrix</u>	<u>Test</u>	<u>Comments</u>
Liquid	8260Petroleum Electronic Deliverables TPH as Gasoline by GC/MS	

Entech Analytical Labs, Inc. is certified for environmental analyses by the State of California (#2346). If you have any questions regarding this report, please call us at 408-588-0200 ext. 225.

Sincerely,



Laurie Glantz-Murphy
Laboratory Director

Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054

Phone: (408) 588-0200

Fax: (408) 588-0201

ECM Group
290 W. Channel Rd.
Benicia, CA 94510
Attn: Chris Bramer

Project Number: 99-110-04
Project Name: Eureka
Date Received: 4/26/2005
P.O. Number: 99-110-04
Sample Collected by: Client

Certificate of Analysis - Data Report

Lab #: 43311-001 Sample ID: MW-1 Matrix: Liquid Sample Date: 4/21/2005 12:30 PM

EPA 8260B - Gas Chromatography/Mass Spectrometry (GC/MS)

EPA 5030B - Purge-and-Trap for Aqueous Samples

Parameter	Result	Flag	DF	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
Benzene	ND		2	1	µg/L	N/A	N/A	04/27/2005	WMS2050427
Toluene	1.7		2	1	µg/L	N/A	N/A	04/27/2005	WMS2050427
Ethyl Benzene	ND		2	1	µg/L	N/A	N/A	04/27/2005	WMS2050427
Xylenes, Total	2.0		2	1	µg/L	N/A	N/A	04/27/2005	WMS2050427
Methyl-t-butyl Ether	110		2	2	µg/L	N/A	N/A	04/27/2005	WMS2050427
tert-Butyl Ethyl Ether	ND		2	10	µg/L	N/A	N/A	04/27/2005	WMS2050427
tert-Butanol (TBA)	ND		2	20	µg/L	N/A	N/A	04/27/2005	WMS2050427
Diisopropyl Ether	ND		2	10	µg/L	N/A	N/A	04/27/2005	WMS2050427
tert-Amyl Methyl Ether	58		2	10	µg/L	N/A	N/A	04/27/2005	WMS2050427

Surrogate Surrogate Recovery Control Limits (%)

Analyzed by: TAF

Reviewed by: MTU

4-Bromofluorobenzene 115 75 - 125

Dibromofluoromethane 111 75 - 125

Toluene-d8 114 75 - 125

GC-MS - Gas Chromatography/Mass Spectrometry (GC/MS)

EPA 5030B - Purge-and-Trap for Aqueous Samples

Parameter	Result	Flag	DF	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
TPH as Gasoline	130		2	50	µg/L	N/A	N/A	04/27/2005	WMS2050427
Surrogate Surrogate Recovery Control Limits (%)									
Analyzed by: TAF									
Reviewed by: MTU									
4-Bromofluorobenzene 106 75 - 125									
Dibromofluoromethane 98.5 75 - 125									
Toluene-d8 99.0 75 - 125									

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Phone: (408) 588-0200 Fax: (408) 588-0201

Quality Control - Method Blank

Liquid

QC Batch ID: WMS2050427

Reviewed by: MTU - 04/29/05

QC Batch ID Analysis Date: 4/27/2005

Method Blank	Method: EPA 8260B			
Parameter	Result	DF	PQLR	Units
Benzene	ND	1	0.50	µg/L
Diisopropyl Ether	ND	1	5.0	µg/L
Ethyl Benzene	ND	1	0.50	µg/L
Methyl-t-butyl Ether	ND	1	1.0	µg/L
tert-Amyl Methyl Ether	ND	1	5.0	µg/L
tert-Butanol (TBA)	ND	1	10	µg/L
tert-Butyl Ethyl Ether	ND	1	5.0	µg/L
Toluene	ND	1	0.50	µg/L
Xylenes, Total	ND	1	0.50	µg/L

Surrogate for Blank	% Recovery	Control Limits
4-Bromofluorobenzene	118	75 - 125
Dibromofluoromethane	115	75 - 125
Toluene-d8	112	75 - 125

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Quality Control - Method Blank Liquid

QC Batch ID: WMS2050427

Reviewed by: MTU - 04/29/05

QC Batch ID Analysis Date: 4/27/2005

Method Blank	Method: GC-MS				
Parameter		Result	DF	PQLR	Units
TPH as Gasoline		ND	1	25	µg/L
Surrogate for Blank % Recovery Control Limits					
4-Bromofluorobenzene	109	75 - 125			
Dibromofluoromethane	102	75 - 125			
Toluene-d8	97.9	75 - 125			

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Quality Control - Laboratory Control Spike / Duplicate Results

Liquid

Reviewed by: MTU - 04/29/05

QC BatchID: WMS2050427

Analysis Date: 4/27/2005

Method: EPA 8260B Conc. Units: µg/L

Parameter	Blank (MDL)	Spike Amt	SpikeResult	% Recovery	RPD	RPD Limits	Recovery Limits
1,1-Dichloroethene	<0.2	20	20	99.3		80 - 120	
Benzene	<0.2	20	21	104		80 - 120	
Chlorobenzene	<0.2	20	20	99.7		80 - 120	
Methyl-t-butyl Ether	<0.3	20	25	126***		80 - 120	
Toluene	<0.2	20	20	102		80 - 120	
Trichloroethene	<0.2	20	21	106		80 - 120	

*** % Recovery is outside of laboratory control limits but within method control limits. The RPD was within the control limits. No corrective action taken.

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	118	75 - 125
Dibromofluoromethane	120	75 - 125
Toluene-d8	111	75 - 125

Parameter	Blank (MDL)	Spike Amt	SpikeResult	% Recovery	RPD	RPD Limits	Recovery Limits
1,1-Dichloroethene	<0.2	20	20	99.0	0.28	25.0	80 - 120
Benzene	<0.2	20	21	104	0.80	25.0	80 - 120
Chlorobenzene	<0.2	20	20	102	2.7	25.0	80 - 120
Methyl-t-butyl Ether	<0.3	20	25	124***	1.6	25.0	80 - 120
Toluene	<0.2	20	21	103	0.94	25.0	80 - 120
Trichloroethene	<0.2	20	22	108	1.9	25.0	80 - 120

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	118	75 - 125
Dibromofluoromethane	117	75 - 125
Toluene-d8	110	75 - 125

Method: GC-MS Conc. Units: µg/L

Parameter	Blank (MDL)	Spike Amt	SpikeResult	% Recovery	RPD	RPD Limits	Recovery Limits
TPH as Gasoline	<6	250	260	102		65 - 135	

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	110	75 - 125
Dibromofluoromethane	101	75 - 125
Toluene-d8	101	75 - 125

Parameter	Blank (MDL)	Spike Amt	SpikeResult	% Recovery	RPD	RPD Limits	Recovery Limits
TPH as Gasoline	<6	250	240	97.0	5.2	25.0	65 - 135

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	108	75 - 125
Dibromofluoromethane	100	75 - 125
Toluene-d8	100	75 - 125

Entech Analytical Labs, Inc.

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Phone: (408) 588-0200 Fax: (408) 588-0201

Quality Control - Matrix Spike / Duplicate Results Liquid

QC Batch ID: WMS2050427

Reviewed by: MTU - 04/29/05

QC Batch ID Analysis Date: 4/27/2005

Method EPA 8260B

Cone. Units: µg/L

Parameter	SampleNumber:	Sample Result	Spike Amount	Spike Result	Analysis Date	% Recovery	RPD	RPD Limits	Recovery Limits
Benzene		ND	20	20.7	4/27/2005	103			65 - 135
Methyl-t-butyl Ether		ND	20	23.6	4/27/2005	118			65 - 135
Toluene		ND	20	20.5	4/27/2005	103			65 - 135

Surrogate % Recovery Control Limits

4-Bromofluorobenzene	114	75 - 125
Dibromofluoromethane	119	75 - 125
Toluene-d8	112	75 - 125

MSD

Parameter	SampleNumber:	Sample Result	Spike Amount	Spike Result	Analysis Date	% Recovery	RPD	RPD Limits	Recovery Limits
Benzene		ND	20	20.5	4/27/2005	102	0.8	25	65 - 135
Methyl-t-butyl Ether		ND	20	22.0	4/27/2005	110	7.3	25	65 - 135
Toluene		ND	20	20.4	4/27/2005	102	0.7	25	65 - 135

Surrogate % Recovery Control Limits

4-Bromofluorobenzene	113	75 - 125
Dibromofluoromethane	116	75 - 125
Toluene-d8	110	75 - 125

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Santa Clara, CA 95054

Chain of Custody / Analysis Request

Attention to:	Chris Browne	Phone No.:	707 751 0653	Purchase Order No (Reqd.):		Send Invoice to (if Different)	Phone
Company Name:	ECM Group	Fax No.:	707 751 0653	Project Number:	OJ-110-01	Company	<i>Redwood Oil Company</i>
Mailing Address:	PO BOX 8072	email:	ecmgrp@aol.com	Project Name:		Billing Address (if Different)	
City:	Berkeley	State:	CA	Zip:	94577	Project Location:	<i>Eureka</i>
Sampler:	J Summers	Field Org. Code:		Turn Around Time		Preservative	
				<input type="checkbox"/> Same Day	<input type="checkbox"/> 1 Day		
				<input type="checkbox"/> 2 Day	<input type="checkbox"/> 3 Day		
				<input type="checkbox"/> 4 Day	<input type="checkbox"/> 5 Day		
				<input type="checkbox"/> Standard (10 Day)			
Order ID:		Sampling		Matrix	Composite	Containers	
Client ID:	Field PT	Lab. No.	Date	Time	Grab	Preservative	
MW-1	43311-DO		4/21	12:30	X		
Special Instructions or Comments							
Relinquished by:	<i>John J. Murphy</i>	Received by:	<i>John J. Murphy</i>	Date:	4/20/01	Time:	10:30 AM
Relinquished by:	<i>John J. Murphy</i>	Received by:	<i>John J. Murphy</i>	Date:	4/20/01	Time:	11:07
Relinquished by:	<i>John J. Murphy</i>	Received by:	<i>John J. Murphy</i>	Date:	4/20/01	Time:	11:07
Relinquished by:		Received by:		Date:		Time:	
NPDES Detection Limits							
<input type="checkbox"/>	NPDES Detection Limits						
<input type="checkbox"/>	EDD Report Required						
<input checked="" type="checkbox"/>	EDF Report Required						
<input type="checkbox"/>	PDF File Required						
<input type="checkbox"/>	LUFT-5 <input type="checkbox"/>						
Metals:							
Al, As, Sb, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Mo, Ni, K, Si, Ag, Na, Se, Sr, Ti, Sn, Ti, V, Zn, W: RCRA-8 <input type="checkbox"/> CAM-17 <input type="checkbox"/> Plating <input type="checkbox"/> PPM-13 <input type="checkbox"/>							